State of Utah

Department of
Environmental Quality

Dianne R. Nielson, Ph.D.
Executive Director

DIVISION OF AIR QUALITY
Richard W. Sprott
Director

OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

DAQE-IN0572013-04

March 9, 2004

Paula H. Doughty
Manager, Environmental Affairs and Strategic Resources
Kennecott Utah Copper Corporation
8362 West 10200 South
Bingham Canyon, Utah 84006-6001

Dear Ms. Doughty:

RE: Intent to Approve: Modify AO# DAQE-433-94 For Kennecott Power Plant, Salt Lake County, CDS A; NA; TITLE V.
Project Code: N0572-013

The attached document is the Intent to Approve (ITA) for the above-referenced project. ITAs are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Nando Meli. He may be reached at (801) 536-4052.

Sincerely,

Rusty Ruby, Manager
New Source Review Section

RR:NM:jc

cc: Salt Lake Valley Health Department
Mike Owens, EPA Region VIII

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

INTENT TO APPROVE: Modify AO# 433-94 for Kennecott Power Plant

Prepared By: Nando Meli, Engineer
(801) 536-4052
Email: nmeli@utah.gov

INTENT TO APPROVE NUMBER

DAQE-IN0572013-04

Date: March 9, 2004

Kennecott Utah Copper Corporation

Source Contact
Steve Verdiman
(801) 569-6364

Richard W. Sprott
Executive Secretary
Utah Air Quality Board

Abstract

Kennecott Utah Copper Corporation (Kennecott) has requested approval to install a small 170 hp John Deere diesel engine that will power the hydraulic system on a rail car unloader system. The system will be used to unload railroad coal cars at the Kennecott Utah Power Plant located at 9600 West 2100 South; Magna, Utah. The coal will not be delivered this year by the eighteen wheel trucks, as in recent years. Rather, the existing railcar delivery system will be used with the aid of the AshRoss unloader system. The coal will be used during the eight month summer coal burn season at the Utah Power Plant, which operates under the Approval Order (AO) DAQE-433-94, dated May 27, 1994. Salt Lake County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for PM_{10} and SO_2, and is a Maintenance area for Ozone. Title V of the 1990 Clean Air Act applies to this source. The requirements for the Title V shall be followed until operating permit for this source has been amended. The State Implementation Plan limits for this source were not changed and there were no new limits set for this source. Therefore, this modification does not require approval by the Utah Air Quality Board as outlined in the Utah Administrative Code Rules 307-305-2. The emissions will increase in tons per year (tpy) as follows: PM_{10} + 0.20, SO_x + 0.20, NO_x + 2.90, CO + 0.60, and VOC + 0.20. The 2002 emissions inventory in tpy with the increase in emissions will be as follows: PM_{10} = 93.71, SO_x = 2,788.09, NO_x = 2,390.14, CO = 104.16 and VOC = 10.99.

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-4. A notice of intent to approve will be published in the Salt Lake Tribune and Deseret News on March 9, 2004. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing it will be held in accordance with UAC R307-401-4. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

General Conditions:

1. This Approval Order (AO) applies to the following company:

   Corporate Office Location

   Kennecott Utah Copper Corporation
   8362 West 10200 South
   Bingham Canyon, Utah 84006
   P. O. Box 6001
   Magna, Utah 84044-6001
   Phone Number: (801) 569-7120
   Fax Number: (801) 569-7192

The equipment listed in this AO shall be operated at the following location:

Kennecott Utah Power Plant, 9600 West 2100 South, Magna

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,507 kilometers Northing, 405 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401-1.

5. All records referenced in this AO or in applicable NSPS and/or NESHAP and/or MACT standards, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:

A.	Emission inventories	Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
B.	All other records	Five years

6. Kennecott Utah Copper Corporation (KUCC) shall install and operate the hydraulic coal load unloader system and shall conduct its operations of the listed equipment at the Power Plant in accordance with the terms and conditions of this AO, which was written pursuant to Kennecott's Notice of Intent submitted to the Division of Air Quality (DAQ) on February 10, 2004.

7. Regardless of any inconsistency between conditions of this AO and Section IX, Part H, and Subparts H.2.b.BB of Section IX, Part H (Emission Limitations) of the SIP, this AO shall take precedence as provided by R307-305-2.

8. This AO shall replace the AO (DAQE-433-94) dated May 27, 1994.

9. The approved installations shall consist of the following equipment or equivalent*:

A. Boilers No. 1, No. 2, and No. 3, each rated at:
431.4 x 10^6 BTU/hour (MMBtu/hr) maximum heat input when burning coal
453 MMBtu/hr maximum heat input when burning natural gas

B. Boiler No. 4, rated at:

838 MMBtu/hr maximum heat input when burning coal
872 MMBtu/hr maximum heat input when burning natural gas

C. Hydraulic Coal Unloader System with Diesel Engine
Diesel Engine

Manufacturer	John Deer
Maximum Rating	170 Hp

D. Other associated equipment, such as coal and ash handling equipment, and maintenance equipment.

* Equivalency shall be determined by the Executive Secretary.

Limitations and Tests Procedures

10. During the period from November 1, to the last day in February, inclusive, the following conditions shall apply:

A. The four boilers shall use only natural gas as a fuel, unless the supplier or transporter of natural gas imposes a curtailment. The power plant may then burn coal, only for the duration of the curtailment plus sufficient time to empty the coal bins following the curtailment. The Executive Secretary shall be notified of the curtailment within 48 hours of when it begins and within 48 hours of when it ends.

B. The following limits on fuel usage shall not be exceeded:

1) 40 million cubic feet per day of natural gas

2) 1370 tons per day of coal, only during curtailment of natural gas supply

C. Natural gas used as fuel:

Except during a curtailment of natural gas supply, emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

1) For each of boilers no. 1, 2, & 3:

a) PM_{10} - 0.004 grain/dscf (68^{o}F, 29.92 in Hg)

b) NO_x - 159 lb/hr
- 336 ppmdv (measured at 3% oxygen)

2) For boiler no. 4:

a) PM_{10} - 0.004 grain/dscf (68^{o}F, 29.92 in Hg)

b) NO_x - 306 lb/hr

- 336 ppmdv (measured at 3% oxygen)

D. Coal used as fuel:

During a curtailment of natural gas supply, emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

1) For each of boilers no. 1, 2, & 3:

a) PM_{10} - 17.3 lb/hr
- 0.029 grain/dscf (68°F, 29.92 in Hg)

b) NO_x - 216 lb/hr
- 426.5 ppmdv (measured at 3% oxygen)

2) For boiler no. 4:

a) PM_{10} - 33.5 lb/hr
- 0.029 grain/dscf (68°F, 29.92 in Hg)

b) NO_x - 377 lb/hr
- 384 ppmdv (measured at 3% oxygen)

E. KUCC shall provide monthly reports to the Executive Secretary showing daily total emission estimates based upon boiler usage, fuel consumption and previously available results of stack tests.

11. During each annual period from March 1 to October 31, inclusive, the following conditions shall apply:

A. KUCC shall use coal, natural gas, oils that meet all the specifications of 40 CFR 266.40(e) and contains less than 1000 ppm total halogens, and/or number two fuel oil or lighter in the boilers.

B. The following limit on fuel usage shall not be exceeded:

50,400 million Btu per day of heat input

C. Emissions to the atmosphere from each emission point shall not exceed the following rates and concentrations:

1) For each of boilers no. 1, 2, & 3:

a) PM_{10} - 17.3 lb/hr
- 0.029 grain/dscf (68°F, 29.92 in Hg)

b) NO_x - 216 lb/hr

- 426.5 ppmdv (measured at 3% oxygen)

2) For boiler no. 4:

a) PM_{10} - 33.5 lb/hr
- 0.029 grain/dscf (68^{o}F, 29.92 in Hg)

b) NO_x - 377 lb/hr
- 384 ppmdv (measured at 3% oxygen)

12. Stack testing to show compliance with the above emission limitations shall be performed for all four boilers and the following air contaminants, as determined by the following test methods in accordance with 40 CFR 60, Appendix A, 40 CFR 51, Appendix M (see Section IX, Part H.2.a for more details), and as directed by the Executive Secretary:

		Method	Retest every
A.	PM_{10}	201/201a	1 year
B.	NO_x	7	1 year

The heat input during all compliance testing shall be no less than 90% of the design rate, which is 388 MMBTU/hr for boilers 1, 2, and 3, and 754 MMBTU/hr for boiler #4.

C. Notification

The Executive Secretary shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary.

The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary.

D. Sample Location

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

E. Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary.

F. PM_{10}

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered PM_{10}.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered PM_{10} shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Executive Secretary.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

G. Nitrogen Oxides (NO_x)

40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other testing methods approved by the Executive Secretary.

H. Calculations

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

13. Visible emissions from the boiler stacks shall not exceed the associated opacity on a six-minute average, based on 40 CFR 60, Appendix A, Method 9, or as measured by a CEM, except as provided for in R307-201 and R307-305:

Natural Gas Fuel	10% opacity
Coal Fuel	20% opacity

Visible emissions from the following types of stationary sources shall not exceed the associated opacity on a six minute average, based on 40 CFR 60, Appendix A, Method 9:

Baghouses	10% opacity
Fugitive Emissions	15% opacity
Fugitive Dust and Diesel Engines	20% opacity

Fuels

14. The sulfur content of any fuel burned shall not exceed 0.52 lb of sulfur per million Btu (annual running average), nor shall any one test exceed 0.66 lb of sulfur per million Btu.

    A. Coal increments will be collected using ASTM 2234, Type I conditions A, B, or C and systematic spacing. Fuel lot size is defined as the weight of fuel consumed during three operational hours.

    B. Percent sulfur content and gross calorific value of the coal on a dry basis will be determined for each gross sample using ASTM D methods 2013, 3177, 3173, and 2015.

    C. Failure of the owner/operator to measure at least 95% of the required increments in any one month shall constitute a violation of this provision.

    D. The owner/operator shall submit monthly reports of sulfur input to the boilers. The reports shall include sulfur content, gross calorific value and moisture content of each gross coal sample; the gross calorific value of all coal and gas; the total amount of coal and gas burned; and the running annual average sulfur input calculated at the end of each month of operation.

    Conditions 14.A, 14.B, and 14.C may be replaced by an alternative testing plan for use with a given source of coal in accordance with R307-203-1.

15. Natural gas consumption shall be determined by metering the gas as it is fed into the boilers with gauges, which shall be installed if necessary. Records shall be kept on a daily basis. Coal consumption shall be determined by examination of purchase records and electricity production records.

Records & Miscellaneous

16. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.

17. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.

18. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:
http://www.airquality.utah.gov/

The annual emissions estimations below include point source emissions and do not include fugitive emissions, fugitive dust, road dust, tail pipe emissions and grandfathered emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for the Kennecott power plant are currently calculated at the following values:

	Pollutant	Tons/yr
A.	PM_{10}	257.20
B.	SO_2	6,219.20
C.	NO_x	3,763.90

The emissions listed in the 2002 emissions inventory for the power plant are currently calculated at the following values:

	Pollutant	Tons/yr
D.	PM_{10}	93.71
E.	SO_2	2,788.09
F.	NO_x	2,390.14
G.	CO	104.16
H.	VOC	10.99

The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final Approval Order.

Sincerely,

Rusty Ruby, Manager
New Source Review Section